

2FA

WASTE DATA SHEET

CUSTOMER INFORMATION:

Company Name USEPA Region II		RES Stream No.	
Plant Address Arkansas Chemical		Mailing Address P.O. Box 41, Windsor	
State New Jersey		State New Jersey Zip 08561	
Company Contact, Technical Jim Bates		Phone 609-443-2800	
Company Contact, Business same		Phone 609-443-2800	
USEPA Generator I.D. No. NJP000791236		State Generator I.D. No. N/A	

GENERAL WASTE DESCRIPTION:

Flammable Organic Liquids	
Type of Process Generating Waste: Bulking of Compatible Drums at CERCLA Site	
Quantity Generated (per mo.) 7500 gallons	Frequency (of removal) one time

TRANSPORTATION INFORMATION:

Hazardous Material: Flammable			
Hazardous Substances:	Concentration	Hazardous Substances	Concentration
Benzene	481 ppm	Ethylbenzene	210 ppm
Naphthalene	508 ppm	Nitrobenzene	654 ppm
Hazardous Characteristics: _____			
Transporter: SJ Transportation		Placarding Flammable Liquid	

TRANSPORTATION EQUIPMENT:

Tank Truck <input type="checkbox"/>	Vacuum Truck <input checked="" type="checkbox"/>	Flatbed <input type="checkbox"/>	Dump Truck <input type="checkbox"/>
Bin <input type="checkbox"/>	Barge <input type="checkbox"/>	Tank Car <input type="checkbox"/>	Other <input type="checkbox"/> _____
Method of Collection:			
Fiberpaks <input type="checkbox"/>	Drums <input type="checkbox"/>	Tanks <input checked="" type="checkbox"/>	Sumps <input type="checkbox"/> Other <input type="checkbox"/> _____
Other available transportation information: _____			



Chemical Waste Management, Inc.

GENERATOR'S WASTE MATERIAL PROFILE SHEET

PLEASE PRINT IN INK OR TYPE (Elite, 12-pitch).



H34138

OHM

H 34138

Waste Profile Sheet Code

CWM Location of Original: _____

(SHADED AREAS FOR CWM USE ONLY)

CWM Sales Rep. #: _____

A. GENERAL INFORMATION

1. Generator Name: USEPA Region II 2. Generator USEPA ID: N J P 0 0 7 9 1 2 3 6
3. Facility Address: Arkansas Chemical 4. Generator State ID: NJ
Foundry Avenue
Newark, NJ 5. Zip Code: _____
6. Technical Contact: Jim Bates 7. Title: Project Manager 8. Phone: (609) 443 - 2800

B. MAIL CHEMICAL WASTE MANAGEMENT, INC. INVOICES TO

1. ☐ Generating Facility (A, above), or
2. Company Name: O.H. Materials 3. Phone: (609) 443 - 2800
4. Address: P.O. Box 41
Windsor, NJ 5. Zip Code: 08561

C. 1. NAME OF WASTE Flammable Organic Liquid

2. PROCESS GENERATING WASTE Bulking of Compatible Drums at Superfund Site

3. Is this waste a Dioxin listed waste as defined in 40 CFR 261.31 (e.g., F020, F021, F022, F023, F026, F027, or F028)?
☐ Yes ☒ No If yes, **DO NOT COMPLETE** this form. Contact your Chemical Waste Management, Inc. sales representative for assistance.

D. PHYSICAL CHARACTERISTICS OF WASTE

1. Color: Unknown 2. Does the waste have a strong incidental odor?
☐ No ☒ Yes If known, describe: Solvent 3. Physical State @ 70°F:
☐ Solid ☐ Semi-Solid ☒ Liquid ☐ Powder Other: _____
4. Layers:
☐ Multilayered ☐ Bi-layered ☒ Single Phased
5. Specific Gravity: 1.09 Range: _____
6. Free Liquids: ☒ Yes ☐ No Volume: N/A %
7. pH: ☐ ≤ 2 ☐ > 2-4 ☐ 4-7 ☐ 7 ☐ 7-10 ☐ 10- < 12.5 ☐ ≥ 12.5 ☒ Range 6 - 9 ☐ NA
8. Liquid Flash Point: ☐ < 73°F ☒ 73-99°F ☐ 100-139°F ☐ 140-199°F ☐ ≥ 200°F ☐ None ☒ Closed Cup ☐ Open Cup

E. CHEMICAL COMPOSITION

	RANGE		
	MIN.	MAX.	
1. Total Solids	43	44	%
Water	28	29	%
Organic Liquid	25	26	%
Chlorine	2	2.5	%
Sulfur	0.9	1.80	%
Volatile Organics	0.250		%
Semi-Volatile Organics	0.160		%
	-		%
	-		%
	-		%
	-		%
	-		%
	-		%
TOTAL: 100			%

Please note: The chemical composition total in the maximum column must be greater than or equal to 100%.

2. Indicate if this waste contains any of the following:

NONE or LESS THAN or ACTUAL

PCB's	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 50 ppm	ppm
Cyanides	<input type="checkbox"/>	<input checked="" type="checkbox"/> < 50 ppm	ppm
Phenolics	<input checked="" type="checkbox"/>	<input type="checkbox"/> < 50 ppm	ppm

F. METALS Indicate if this waste contains any of the following:

1. ☐ EP TOX/TCLP or 2. ☒ Total
METAL LESS THAN or ACTUAL
(Parts Per Million)

Arsenic	<input checked="" type="checkbox"/> < 5	<input type="checkbox"/> < 500
Barium	<input checked="" type="checkbox"/> < 100	
Cadmium	<input checked="" type="checkbox"/> < 1	<input type="checkbox"/> < 100
Chromium	<input checked="" type="checkbox"/> < 5	
Lead	<input checked="" type="checkbox"/> < 5	<input type="checkbox"/> < 500
Mercury	<input checked="" type="checkbox"/> < 0.2	<input type="checkbox"/> < 20
Selenium	<input checked="" type="checkbox"/> < 1	<input type="checkbox"/> < 100
Silver	<input checked="" type="checkbox"/> < 5	
Chromium-Hex	<input checked="" type="checkbox"/> < 5	<input type="checkbox"/> < 500
Copper	<input checked="" type="checkbox"/> < 5	
Nickel	<input checked="" type="checkbox"/> < 5	<input type="checkbox"/> < 134
Thallium	<input checked="" type="checkbox"/> < 5	<input type="checkbox"/> < 130
Zinc	<input checked="" type="checkbox"/> < 5	30
	<input type="checkbox"/> <	
	<input type="checkbox"/> <	
	<input type="checkbox"/> <	



Waste Management, Inc.

GENERATOR'S WASTE MATERIAL PROFILE SHEET: INCINERATION TREATMENT ADDENDUM



WASTE PROFILE SHEET CODE

OHM H34138

A. GENERAL INFORMATION

GENERAL NAME: Organic Liquid

NAME OF WASTE: Flammable Organic Liquid

PROCESS GENERATING WASTE: Bulking of Compatible Drums at CERCLA Site

B. CHEMICAL CHARACTERISTICS OF WASTE

1. Heat Value (BTU/lb.) 12,370

2. Percent Ash 2.51%

3. Percent Total Halogens 2.3 %

4. Percent Sulfur 0.819

5. Percent Nitrogen UNK %

6. Percent Water 28.3%

C. PHYSICAL CHARACTERISTICS OF WASTE

1. Viscosity (cps) medium

2. Percent Total Solids 44.12%

3. Percent Susp. Solids 3.66%

4. Percent Dissolved Solids 15.46

5. Vapor Pressure 50°F (psia) UNK %

D. SPECIAL LISTED CONSTITUENTS:

40 CFR 261 APPENDIX VIII

1,1,2-Trichloroethane

Ethylbenzene

Naphthalene

Benzene

Ether

Tetrachloroethylene

Nitrobenzene

E. ADDITIONAL WASTE INFORMATION

1. Pumpable? @ 50 F ☒ Yes ☐ No 1a. Method

1.b. Can the waste be heated to improve flow? ☒ Yes ☐ No

2. Soluble in Water? ☐ Yes ☒ No

3. Particle Size: Will solid portion of waste pass through a 1/8" screen? ☒ Yes ☐ No

4. Other Information:

F. I hereby certify that all information submitted in this and all attached documents is complete and accurate, and that all known or suspected hazards have been disclosed.



HAZARDOUS WASTE DATA SHEET

SOLVENTS RECOVERY SERVICE OF NEW JERSEY, INC.
1200 Sylvan Street, Linden, NJ 07036 201-862-2000Solid Waste Facility NJ DEP #2009C
EPA ID# NJD 002182897

P.I. #

GENERATOR AND WASTE IDENTIFICATION		SALESMAN	
WASTE DESCRIPTION Bulked Organic Liquids		GENERATOR USEPA Region II	
		ADDRESS Arkansas Chemical, Foundry Ave.	
GENERATING PROCESS Bulking of Compatible		CITY, STATE, ZIP Newark, NJ	
Drums at CERCLA Site		TECHNICAL CONTACT Jim Bates	
USEPA HAZ. WASTE # D001		TITLE Project Manager	
STATE HAZ. WASTE # D001		TEL. # (609) 443-2800 EXT. 42	
LISTED HAZARDOUS SUBSTANCE 49 CFR 172.101 N/A		GENERATOR EPA ID # NJP000791236	
DOT PROPER SHIPPING NAME "RQ" Waste Flammable		BILL TO O.H. Materials	
Liquid, N.O.S. (D001)		ADDRESS P.O. Box 41	
HAZARD CLASS Flammable Liquid UN1993		CITY, STATE, ZIP Windsor, NJ 08561	
		TEL. # (609) 443-2800 EXT.	

WASTE QUANTITY	
SHIPMENT FREQUENCY	QUANTITY UNIT 7500 gallons per
TIME INTERVAL one-time	VOLUME IN STORAGE
QUANTITY UNIT 7500 gallons	CONTAINER SIZE AND TYPE 10k tank

DESCRIPTION			
PHYSICAL STATE <input checked="" type="checkbox"/> LIQUID <input type="checkbox"/> SEMI-SOLID <input type="checkbox"/> SOLID	TOTAL SOLIDS WT % 42.9 SUSPENDED SOLIDS WT % 3.66		
PHASES/LAYERING <input checked="" type="checkbox"/> UNILAYER <input type="checkbox"/> BILAYER <input type="checkbox"/> MULTILAYER	BTU/# 12,370 ASH% 2.51	WATER WT % 28.27 SP. GR. 1.09	
VISCOSITY <input type="checkbox"/> HIGH <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> LOW	FLASH POINT °F 92 TYPE Closed Cup		
TYPE OF SOLIDS <input type="checkbox"/> ORGANIC <input type="checkbox"/> INORGANIC <input checked="" type="checkbox"/> MIXED	PH RANGE FROM NA TO NA VAP. PRES. mm Hg @ 24°C NK		
ODOR <input type="checkbox"/> NONE <input checked="" type="checkbox"/> MILD <input type="checkbox"/> STRONG	BOILING POINT °C Not Known FREEZING POINT °C Not Known		

COMPOSITION - INCLUDE WATER - MUST ADD TO 100%		METALS CONTENT - PPM BY WT. TOTAL/PPM IN FREE LIQUID			
COMPONENT	%	ARSENIC	0.5	SELENIUM	0.5
Total Solids	44	CADMIUM	0.5	THALLIUM	5.0
Water	28.27	CHROMIUM VI	0.5	COPPER	1.0
Chlorine	2.3	LEAD	1.6	BARIUM	5.0
Organic Liquid	25	MERCURY	0.05	ZINC	30
Sulfur	0.9180	NICKEL	2		
Volatile Organics	0.250				
Semi-Volatile Organics	0.160				

SUPPORTING INFORMATION	
TOTAL % CHLORINE 2.25	TOTAL % SULFUR 0.918
PESTICIDES <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO HERBICIDES <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO PCBs <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
AVAILABLE ANALYTICAL DATA ATTACHED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
MATERIAL SAFETY DATA SHEETS ATTACHED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
IDENTIFY ANY SUBSTANCE IN THIS WASTE LISTED IN SARA TITLE III None	
SEE 40 CFR 355 App.A	

SPECIAL HANDLING INSTRUCTIONS
Sample Included

CERTIFICATION

THE UNDERSIGNED HEREBY CERTIFIES THAT THE ABOVE INFORMATION INCLUDES AN ACCURATE DESCRIPTION OF THE NATURE AND SOURCE OF THE MATERIAL; THE PHYSICAL PROPERTIES AND CHEMICAL COMPOSITION HAVE BEEN FULLY DESCRIBED USING ALL AVAILABLE INFORMATION AND THAT ALL KNOWN OR SUSPECTED HAZARDS HAVE BEEN DISCLOSED; THE INSTRUCTIONS ON THE BACK OF THIS FORM HAVE BEEN READ AND UNDERSTOOD. ALL SAMPLES SUBMITTED HAVE BEEN TAKEN IN ACCORDANCE WITH SAMPLING PROCEDURES SET FORTH IN 40 CFR 261. THESE SAMPLES MUST BE QUALIFIED AS CONFORMING TO THIS HAZARDOUS WASTE DATA SHEET AND AS BEING TREATABLE IN SRS's FACILITY. THE CHARGE FOR THIS IS \$100. THE UNDERSIGNED AGREES TO ACCEPT, HONOR AND PAY SRS's INVOICE FOR THIS SERVICE.

DATE 12-30-87 NAME MARK P. PANE TITLE Ox SIGNATURE Mark P. Pane	
FOR SRS USE	

HWDS RECEIVED ON	SAMPLE RECEIVED ON	LAB REPORT ISSUED ON
APPROVED FOR COMPLIANCE ON	APPROVED FOR PROCESSING ON	APPROVED FOR QUOTATION ON

Wastex Industries, Inc.

P.A. DER 46005
N.J. DEP 77371

Licensed Analytical Laboratories

28 S. Hanover Street
125 Main Avenue

Pottstown, PA. 19464 215/327-0880
Elmwood Park, N.J. 07407 201/791-6700

P.O. # J5359-E4-36362
Sample # 871123.013

Customer # ohmate
For O.H. Materials Corp.
P.O. Box 41
Windsor NJ 08561-0041
Attn: Jim Bates

Date Sampled 11-17-87 8:00 AM Date Rec. 11-23-87 10:20 AM
Sampled By JC/JK/BS Rec by SLG
Sample composite PWS ID :
Sample ID Newark NJ U.S. E.P.A. Region II Proj. 5359-E4
3 4529-25 Organic Liquid Composite

General	Incineration Analysis
Dissolved Solids	15.46 %
Suspended Solids	3.66 %
Total Solids	44.12 42.92 %
Flash Point	92 °F
Moisture Content	28.27 %
Sediment Content	25 %
BTU Content	12,370 BTU/lb
Ash Content	2.51 %
Density	1.09 g/ml

Metals	
Antimony	<0.5 mg/kg
Arsenic	<0.5 mg/kg
Barium	<5 mg/kg
Beryllium	<0.5 mg/kg
Cadmium	<0.5 mg/kg
Chromium	<5 mg/kg
Chromium (HEX)	<0.5 mg/kg
Copper	1 mg/kg
Iron	<1 mg/kg
Lead	1.6 mg/kg
Manganese	<1 mg/kg
Mercury	<0.05 mg/kg
Nickel	<2 mg/kg
Selenium	<0.5 mg/kg
Silver	<0.5 mg/kg
Thallium	<5 mg/kg
Zinc	30 mg/kg

Anions	
Bromine Content	<100 mg/kg
Chlorine Content	22,500 mg/kg

Iodine Content

<100

mg/kg

Sulfur Content

9,180

mg/kg

Pesticides

Aldrin	<0.02	mg/kg
alpha-BHC	<0.02	mg/kg
beta-BHC	<0.02	mg/kg
gamma-BHC	<0.02	mg/kg
delta-BHC	<0.02	mg/kg
4,4'-DDT	<0.02	mg/kg
4,4'-DDE	<0.02	mg/kg
4,4'-DDD	<0.02	mg/kg
Dieldrin	<0.02	mg/kg
alpha-Endosulfan	<0.02	mg/kg
beta-Endosulfan	<0.02	mg/kg
Endosulfan Sulfate	<0.02	mg/kg
Endrin	<0.02	mg/kg
Endrin Aldehyde	<0.02	mg/kg
Heptachlor	<0.02	mg/kg
Heptachlor Epoxide	<0.02	mg/kg
PCB-1242	<0.2	mg/kg
PCB-1254	<0.2	mg/kg
PCB-1221	<0.2	mg/kg
PCB-1232	<0.2	mg/kg
PCB-1260	<0.2	mg/kg
PCB-1016	<0.2	mg/kg
PCB-1248	<0.2	mg/kg
Chlordane	<0.2	mg/kg
Toxaphene	<0.5	mg/kg

GC/MS

GC/MS Volatiles

see attached sheets

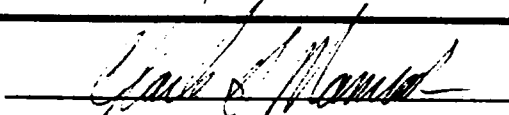
GC/MS Base/Neutrals

see attached sheets

GC/MS Acid Compounds

see attached sheets

Signature



Wastex Industries, Inc.

P.A. DER 46005
N.J. DEP 77371

Licensed Analytical Laboratories

28 S. Hanover Street
125 Main Avenue

Pottstown, PA. 19464 215/327-0880
Elmwood Park, N.J. 07407 201/791-6700

P.O. # J5359-E4-36362
Sample # 871123.016

Customer # ohmate
For O.H. Materials Corp.
P.O. Box 41
Windsor NJ 08561-0041
Attn: Jim Bates

Date Sampled 11-17-87 3:00 AM Date Rec. 11-23-87 10:20 AM
Sampled By JK/JC Rec by SLG
Sample grab PWS ID :
Sample ID Newark NJ U.S. E.P.A. Region II Proj. 5359-E4
6 4529-21 Cyanide Liquid

General

Cyanide Total	0.09	mg/kg
Cyanide Amenable	<0.01	mg/kg
Cyanide Free	<5	mg/kg

Signature

Charles J. Manna

ANALYSIS OF VOLATILE ORGANIC COMPOUNDS IN SOIL, SEDIMENT, SLUDGE AND WASTE MATERIALS. METHOD 8240. GAS CHROMATOGRAPHY/ MASS SPECTROSCOPY

FORM: VOAFORM8

CLIENT	WASTEX INDUSTRIES INC.	GC/MS REF#	V009A21A.D
SAMPLE #	871123.013	MATRIX	LIQUID WASTE
COLLECTED	11/17/87	DATE ANALYZED	11/30/87
C.A.L. #	87-890	ANALYST	SABATINO
DATE REC.	11/24/87	REPORT DATE	12/12/87
% SOLIDS	SEE NOTE #1	DILUTION FACTOR	100

COMPOUND	CAS #	CONCENTRATION MGS/KG (1)	PQL (2) MGS/KG
Chloromethane	74-87-3	N.D.<1.00	1.00
Bromomethane	74-83-9	N.D.<1.00	1.00
Vinyl Chloride	75-01-4	N.D.<1.00	1.00
Chloroethane	75-00-3	70.7	1.00
Methylene Chloride	75-09-2	32.5	0.50
Acetone	67-64-1	N.D.<10.0	10.0
Carbon Disulfide	75-15-0	N.D.<1.00	1.00
Trichlorofluoromethane	75-69-4	N.D.<0.50	0.50
Dichlorodifluoromethane		N.D.<0.50	0.50
1,1-Dichloroethene	75-35-4	32.6	0.50
1,1-Dichloroethane	75-35-3	28.6	0.50
trans-1,2-Dichloroethene	156-60-5	1.50	0.50
Chloroform	67-66-3	178	0.50
1,2-Dichloroethane	107-06-2	520	0.50
2-Butanone	78-93-3	N.D.<10.0	10.0
1,1,1-Trichloroethane	75-55-6	458	0.50
Carbon Tetrachloride	56-23-5	0.48	0.50
Vinyl Acetate	108-05-4	N.D.<5.00	5.00
Bromodichloromethane	75-27-4	0.58	0.50
1,2-Dichloropropane	78-87-5	N.D.<10.0	1.00
cis-1,3-Dichloropropene	10061-01-5	0.78	1.00
Trichloroethene	79-01-6	3.06	0.50
Benzene	71-43-2	481	0.50
Dibromochloromethane	124-48-1	N.D.<0.50	0.50
1,1,2-Trichloroethane	79-00-5	N.D.<0.50	0.50
trans-1,3-Dichloropropene	10061-02-6	N.D.<10.0	1.00
2-Chloroethylvinyl Ether	110-75-8	N.D.<10.0	1.00
Bromoform	75-25-2	N.D.<0.50	0.50
1,1,2,2-Tetrachloroethane	79-34-5	1.15	0.50
Tetrachloroethene	127-18-4	295	0.50
2-Hexanone	591-78-6	N.D.<5.00	5.00
4-Methyl-2-pentanone	108-10-1	N.D.<5.00	5.00
Toluene	108-88-3	115	0.50
Chlorobenzene	108-90-7	2.41	0.50
Ethylbenzene	100-41-4	210	0.50
Styrene	100-42-5	N.D.<0.50	0.50
1,3 + 1,4- Xylene Isomers		N.D.<0.50	0.50
1,2-Xylene		N.D.<0.50	0.50
1,2-Dichlorobenzene	95-50-1	N.D.<0.50	0.50
1,3-Dichlorobenzene	541-73-1	N.D.<0.50	0.50
1,4-Dichlorobenzene	106-46-7	N.D.<0.50	0.50

(1) MGS/KG = Milligrams/Kilogram (As Received), PPM

(2) PQL = Practical Quantitation Limit, PPM

(3) N.D. = Non-Detectable, less than concentration indicated

SURROGATE COMPOUND RECOVERY

	MICROGRAMS		%RECOVERY
	ADDED	FOUND	
Bromochloromethane	4.00	5.28	132
1,2-Dichloroethane D-4	4.00	2.11	53
1,4-Diflourobenzene	4.00	4.32	108
Fluorobenzene	4.00	4.32	108
Toluene D-8	4.00	5.95	149
2-Bromo-1-Chloropropane	4.00	7.12	178
Ethylbenzene D-10	4.00	3.24	81
1,4-Dichlorobutane	4.00	13.11	328
4-Bromofluorobenzene	4.00	23.58	590

NON-TARGET COMPOUNDS

CONCENTRATION
MGS/KG (4)

NOT REQUESTED BY CLIENT

(4) Concentrated Estimated Using D-6 Benzene's Response Factor


Thomas Sabatino
C.A.L. Technologies Inc.

ANALYTICAL METHOD SUMMARY AND APPLICATIONS FOR VOLATILE ORGANIC
COMPOUND ANALYSIS

Volatile organic compounds are introduced into a gas chromatographic/mass spectrometer system by either a purge and trap isolation system or by direct injection of liquid or gaseous sample (in limited applications). The organic compounds are separated by gas chromatography and detected by mass spectrometry, which is used to provide both qualitative and quantitative information.

If either purge and trap or direct sample introduction is not applicable to the sample matrix, a portion of the sample is dispersed in methanol to dissolve the volatile organic components; an aliquot of the methanol extract is added to reagent water and is subjected to the purge and trap technique and analyzed by gas chromatography/mass spectrometry.

The purge and trap or dynamic head space procedure involves the use of an inert gas (Helium or Nitrogen) which is bubbled through the sample solution at ambient temperature, and the volatile components are transferred from the aqueous phase to the vapor phase. The vapor is swept onto a sorbent column where the volatile organic compounds are trapped. After purging is completed, the sorbent column is heated and backflushed with chromatographic column carrier gas to desorb the analytes onto the gas chromatographic column. The gas chromatographic column is then heated so that the analyte compounds are separated, the separated components are then detected by a mass spectrometer.

Method 8240 is used to determine volatile organic compounds in a variety of solid waste matrices. This method is applicable to nearly all types of samples, regardless of water content, including ground water, aqueous sludges, caustic liquors, waste solvents, oily wastes, mounds, tars, fibrous wastes, polymeric emulsions, filter cakes, spent carbons, spent catalyst, soils and sediments.

Method 8240 can be used to quantify most volatile organic compounds that have boiling points below 200 C and that are insoluble or slightly in water. Volatile water-soluble compounds can be included in this analytical technique. However; for the more soluble compounds, quantitation limits are approximately ten to fifty times higher because of poor purging efficiency. The method is also limited to compounds which separate as sharp chromatographic components. Such compound classes include: low molecular weight halogenated hydrocarbons, aromatic hydrocarbons, ketones, nitriles, acetates, acrylates, ethers and mercaptans.

The practical quantitation limit (PQL) for Method 8240 for an individual (ideal) compound is approximately 5 ug/kg (PPB, wet weight) for soil/ sediment samples, 500 ug/kg (PPB, wet weight) for low level wastes and 5 ug/l (PPB) for ground water. PQLs will be proportionately higher for sample extracts and samples that require dilution or reduced sample size to avoid saturation of the analytical system.

Method 8240 is based on a purge and trap sample isolation procedure followed by gas chromatographic separation and mass spectrometry detection. This method is restricted to use by, or under the supervision of, analysts experienced in the use of purge and trap isolation systems and gas chromatographic/mass spectrometry systems and skilled in the interpretation of spectra and their use as a quantitative tool.

ANALYSIS OF SEMIVOLATILE ORGANIC COMPOUNDS IN SOIL/ SEDIMENT
USING USEPA METHOD 8270, GAS CHROMATOGRAPHY/ MASS SPECTROSCOPY
FORM: BNFORM4

CLIENT	WASTEX INDUSTRIES INC.	MATRIX	LIQUID WASTE
SAMPLE #	871123.013	DATE EXTRACTED	11/30/87
C.A.L. #	87-890	DATE ANALYZED	11/30/87
DATE REC.	11/30/87	ANALYST	SABATINO
GC/MS REF #	B009A11A.D	REPORT DATE	12/17/87
% SOLIDS	SEE NOTE #1	DILUTION FACTOR	20.0

TARGET COMPOUND	CAS NUMBER	CONCENTRATION MG/KG(1)	PQL(2) MG/KG
Phenol	180-95-02	N.D. < 50	50
Bis(2-Chloroethyl) Ethyl	111-44-4	N.D. < 50	50
2-Chlorophenol	95-57-8	N.D. < 50	50
1,3-Dichlorobenzene	541-73-1	N.D. < 50	50
1,4-Dichlorobenzene	106-46-7	N.D. < 50	50
Benzyl Alcohol	100-51-6	N.D. < 100	100
1,2-Dichlorobenzene	95-50-1	N.D. < 50	50
2-Methylphenol	95-48-7	N.D. < 50	50
bis(2-Chloroisopropyl)			
Ether	39638-32-9	407	50
4-Methylphenol	106-44-5	N.D. < 50	50
N-Nitroso-Di-N-Propylamine	621-64-7	N.D. < 50	50
Hexachloroethane	67-72-1	N.D. < 50	50
Nitrobenzene	98-95-3	654	50
Isophorone	78-59-1	N.D. < 50	50
2-Nitrophenol	88-75-5	N.D. < 50	50
2,4-Dimethylphenol	105-67-9	N.D. < 50	50
Benzoic Acid	65-85-0	N.D. < 100	100
Bis(2-Chloroethoxy)			
Methane	111-91-1	N.D. < 50	50
2,4-Dichlorophenol	120-83-2	N.D. < 50	50
1,2,4-Trichlorobenzene	120-82-1	N.D. < 50	50
Naphthalene	91-20-3	508	50
4-Chloroaniline	106-47-8	N.D. < 100	100
Hexachlorobutadiene	87-68-3	N.D. < 50	50
4-Chloro-3-Methylphenol	59-50-7	N.D. < 50	50
2-Methylnaphthalene	91-57-6	N.D. < 50	50
Hexachlorocyclopentadiene	77-47-4	N.D. < 50	50
2,4,6-Trichlorophenol	88-06-2	N.D. < 50	50
2,4,5-Trichlorophenol	95-95-4	N.D. < 50	50
2-Chloronaphthalene	91-58-7	N.D. < 50	50
2-Nitroaniline	88-74-4	N.D. < 100	100
Dimethyl Phthalate	131-11-3	54	50
Acenaphthylene	208-36-8	N.D. < 50	50
3-Nitroaniline	99-09-2	N.D. < 100	100
Acenaphthene	83-32-9	N.D. < 50	50
2,4-Dinitrophenol	51-28-5	N.D. < 100	100
4-Nitrophenol	100-02-7	N.D. < 100	100
Dibenzofuran	132-64-9	N.D. < 50	50
2,4-Dinitrotoluene	121-14-2	N.D. < 50	50
2,6-Dinitrotoluene	606-20-2	N.D. < 50	50
Diethylphthalate	84-66-2	N.D. < 50	50
4-Chlorophenyl Phenyl			
Ether	7005-72-3	N.D. < 50	50

COMPOUNDS CONTINUED	CAS NUMBER	CONCENTRATION MG/KG(1)	PQL(2) MG/KG
Fluorene	86-73-7	N.D. < 50	50
4-Nitroaniline	100-01-6	N.D. < 100	100
4,6-Dinitro-2-Methylphenol	534-52-1	N.D. < 100	100
N-Nitrosodiphenylamine	86-30-6	N.D. < 50	50
4-Bromophenyl Phenyl Ether	101-55-3	N.D. < 50	50
Hexachlorobenzene	118-74-1	N.D. < 50	50
Pentachlorophenol	87-86-5	N.D. < 100	100
Phenanthrene	85-01-8	N.D. < 50	50
Anthracene	120-12-7	N.D. < 50	50
Di-n-Butylphthalate	84-74-2	N.D. < 50	50
Fluoranthene	206-44-0	N.D. < 50	50
Pyrene	129-00-0	N.D. < 50	50
Butyl Benzyl Phthalate	85-68-7	N.D. < 50	50
3,3'-Dichlorobenzidine	91-94-1	N.D. < 100	100
Benzo(a)Anthracene	56-55-3	N.D. < 50	50
Bis(2-Ethylhexy)Phthalate	117-81-7	N.D. < 50	50
Chrysene	218-01-9	N.D. < 50	50
Di-n-octyl Phthalate	117-84-0	N.D. < 50	50
Benzo(b)Fluoranthene	205-99-2	N.D. < 50	50
Benzo(k)Fluoranthene	207-08-9	N.D. < 50	50
Benzo(a)Pyrene	50-32-8	N.D. < 50	50
Indeno(1,2,3-cd)Pyrene	193-39-5	N.D. < 50	50
Dibenz(a,h)Anthracene	53-70-3	N.D. < 50	50
Benzo(g,h,i)Perylene	191-24-2	N.D. < 50	50

SURROGATE COMPOUND RECOVERIES

SURROGATE	MG/KG ADDED	% RECOVERY
4-FLUOROANILINE	2000	52
DECAFLUOROBIPHENYL	2000	121
1-FLUORONAPHTHALENE	2000	99
2,2'-DIFLUOROBIPHENYL	2000	111
4,4'-DIBROMOBIPHENYL	2000	89
D-14 4-TERPHENYL	2000	88

NONTARGET COMPOUNDS

RETENTION MAJOR
TIME, MIN IONCONCENTRATION
MG/KG (1)

NOT REQUESTED BY CLIENT

- (1) CONCENTRATION CALCULATED AS RECEIVED (WATER INSOLUBLE WASTE)
(2) PRACTICAL QUANTITATION LIMITS BASED ON A 30 GRAM SAMPLE SIZE
(3) NONTARGET COMPOUNDS QUANTITATED RELATIVE TO PHENANTHRENE-D10'S
RESPONSE FACTOR
(4) PARENT ION NOT FOUND IN EI MASS SPECTRA


Thomas Sabatino
C.A.L. Technologies Inc.

ANALYTICAL METHOD SUMMARY AND APPLICATIONS FOR SEMIVOLATILE ORGANIC COMPOUND ANALYSIS

Method 8270 is used to qualitatively identify and quantitate, using extracted ion profiles, semivolatile organic compounds in extracts prepared from all types of solid waste matrices, soils and ground water. Direct injection of a sample may be used in limited applications.

Method 8270 can be used to quantitate most neutral, acidic and basic organic compounds that are soluble in methylene chloride and capable of being separated without derivatization as sharp chromatographic components from a gas chromatograph utilizing a fused silica capillary column coated with a slightly polar organosilane stationary phase. Organic compound classes which are analyzed by this procedure include the following: polynuclear aromatic hydrocarbons, chlorinated hydrocarbons, organochlorine pesticides, phthalate esters, organophosphate esters, nitrosoamines, haloethers, aldehydes, ethers, ketones, anilines, pyridines, quinolines, substituted nitroaromatic compounds and phenols.

The following individual organic compounds may require special treatment when being analyzed by this method. Benzidine can be subject to oxidative losses during extract concentration, chromatography is also very poor for this compound. Using alkaline conditions for base/neutral extraction of aqueous samples; Alpha-BHC, Lindane, Endosulfan I and II, and Endrin are subject to decomposition. Neutral extraction conditions should be employed if these compounds are expected. Hexachlorocyclopentadiene is subject to thermal decomposition in the inlet of the gas chromatograph, chemical reaction in acetone solution and photochemical decomposition. N-nitrosodimethyl amine is difficult to separate from the solvent under the chromatographic conditions described in this analytical procedure. N-nitrosodiphenyl amine decomposes in the gas chromatographic inlet and cannot be separated from Diphenylamine. Pentachlorophenol, 2,4-Dinitrophenol, 4-Nitrophenol, 4,6-Dinitro-2-Methylphenol, 4-Chloro-3-Methylphenol, Benzoic Acid, 2-Nitroaniline, 3-Nitroaniline, 4-Chloroaniline and Benzyl Alcohol are subject to erratic chromatographic behavior, especially if the gas chromatographic system is contaminated with high boiling or polymeric materials from the sample extract.

The Practical Quantitation Limit (PQL) of Method 8270 for the determination of an individual semivolatile compound is approximately 1 MG/KG (wet weight) for soil/ sediment matrices (low level), 1 to 200 MG/KG for waste samples (depending on the matrix and method of sample preparation) and 10 UG/L for ground water samples. PQLs will be proportionately higher for sample extracts that require dilution to avoid saturation of the analytical system.

Method 8270 is restricted to use by or under the supervision of analysts experienced in the use of gas chromatography/ mass spectrometer systems and skilled in the interpretation of mass spectra. Each analyst must demonstrate the ability to generate acceptable results with this analytical procedure.

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EPA

Rollins®
Environmental Services

WASTE DATA SHEET

CUSTOMER INFORMATION:

Company Name USEPA Region II

RES Stream No.

Plant Address Arkansas Chemical

Mailing Address P.O. Box 41

State 185 Foundry Street-Newark, NJ

State Windsor, NJ

Zip 08561

Company Contact, Technical

Jim Bates or Melinda Grieswell

Phone

609-443-2800

Company Contact, Business

Same

Phone

Same

USEPA Generator I.D. No. NJP000791236

State Generator I.D. No. N/A

GENERAL WASTE DESCRIPTION: EP Toxic Organic Solids

Type of Process Generating Waste: Clean-Up of an abandoned chemical facility

Quantity Generated (per mo.) 75-150 55gal. drums

Frequency (of removal)

One-time

TRANSPORTATION INFORMATION:

Hazardous Material: ORM-E

Hazardous Substances:

Concentration

Hazardous Substances

Concentration

Lead

13 ppm

Hazardous Characteristics: EP-Toxic Lead

Transporter: SJ Transportation

Placarding ORM-E

TRANSPORTATION EQUIPMENT:

Tank Truck ☐Vacuum Truck ☐Flatbed ☐Dump Truck ☒Bin ☐Barge ☐Tank Car ☐Other ☐

Method of Collection:

Fiberpaks ☐Drums ☐Tanks ☐Sumps ☐Other ☒ Bulk

Other available transportation information:

DETAILED WASTE DESCRIPTION AND REGULATORY COMPLIANCE:

RCRA Characterization Codes

DQ08

Reason for above characterization: Lead exceeding limits of 40 CFR

State Characterization Codes

D008

OSHA: Contain listed compounds?

No

EPA : PCB conc > 50 ppm?

No

NRC: Radioactive?

No

PHS: Infectious Wastes?

No

FIFRA: Does this waste contain a pesticide for which the EPA has issued specific disposal requirements?

No

CHEMICAL COMPOSITION:

Compound Name	Norm. Conc. Range % W	Chemical Formula
Solid Organic Material Contaminated with EP		
Toxic Metals	84.21	
Misc. Debris(Protective Clothing,tools, etc.)	13.2194	
Sulfur	1.553	
Chlorine	0.8536	
Water Content	0.09	
Iron	0.0335	
Zinc	0.0405	

LABORATORY ANALYSIS

PHYSICAL PROPERTIES

Metals	CN	<5	Mg/L	PHYSICAL STATE @ 25°C	BTU	13470	/lb
Pb	13	Mg/L	TOC	842100	Mg/L	GAS	LIQUID
Hg	<0.05	Mg/L	COD	N/A	Mg/L	SOLID	X SLUDGE
Cd	0.55	Mg/L	BOD	N/A	Mg/L	SLURRY	PASTE
Be	<0.5	Mg/L	SS	N/A	Mg/L	GRANULAR	CRYSTAL
As	<0.5	Mg/L	TDS	N/A	Mg/L	POLYMERIC	AMORPHOUS
Na/K	N/A	Mg/L	Br	<0.1	% Wt	Not Known	
Cr		Mg/L	Cl	0.8536	% Wt	MELTING PT	Not Known
Ni		Mg/L	F	N/A	% Wt	BOILING PT	Not Known
Other		Mg/L	I	<0.1	% Wt	pH	6-9
		Mg/L	S	0.1553	% Wt	FLASH PT	> 140

Is the waste reactive with water? No with air? No

Is a representative sample provided? Yes

Give any other additional information on the hazards of the waste: Analysis Attached

I hereby certify that the above information is complete and accurate.

Mark P. Pane
Customer Signature

OSC
Title

12-30-87
Date

ST000014343

A	
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SALES # WASTE #

ThermalKEM An American NuKEM Company
P.O. Box 2664 C.R.S.
Rock Hill, South Carolina 29731-2664

WASTE CHARACTERIZATION FORM (WCF)

- I. **INSTRUCTIONS:** The Following Information must be provided by the generator of a chemical waste stream in order that **this** stream be transported, treated, or disposed of in strict compliance with EPA, DOT, and OSHA regulations. Answers to all of the following questions are critical so please complete this form in detail. If the constituent is not present, indicate so in the appropriate space. If a supporting laboratory report is available please attach. This form must be filled out in ink or typewritten, signed and the original sent to the address below **with** the sample. (Sample shipment must meet DOT compliance)

Submit this form and sample to: Laboratory Manager

ThermalKEM
Route 5, Vernesdale Road
Rock Hill, South Carolina 29730

II. **GENERATOR INFORMATION:**

(a) **Generator name and location:** USEPA Region II
Arkansas Chemical, Newark, NJ

Generator mailing address: USEPA
Woodbridge Avenue
Edison, NJ

(b) **Generator contact:** Mark Pane Title OSC Telephone /

(c) **U.S.E.P.A. I.D. #:** NJP000791234 State I.D. # N/A

III. **WASTE STREAM DATA**

(a) **Generating facility type/process:** Bulking of compatible drums at abandoned chemical facility

(b) **Generating facility description of waste:** Organic Solid

(c) **EPA description:** EP Toxic contaminated Solid EPA # D008

(d) **State description:** Same State # Same

IV. **ANALYTICAL DATA:**

(a) **Physical description:** Physical state at room temperature:
X Solid; Liquid, Slurry, Paste, Powder, Other describe

(b) **% Solids** 84.21 % Total Dissolved Solids NA

(c) **Density** 1.65 gms/ml, pH 6-9, Ash 7.42 %, color Not Known odor Not Known

(d) **Heat Content** 13470 BTU/lb, Flash Point > 140 °F

(e)* **Reactive** yes, X no; if yes explain:

*As defined under AOCFR 261.23; spontaneously reactive or explosive, violently reacts with water, generates toxic vapors when mixed with air or water, if subjected to a strong heating source is the waste explosive or highly reactive, is the waste a cyanide or sulfide bearing waste, it is a cyanide or sulfide bearing waste and cyanide and sulfide fumes are formed when the pH is between 2.0 and 12.5. Is the waste an explosive as defined in 49 CFR 173.51, 173.53.

(f) **General Chemical Composition**

- I. **Test the major constituents present in the waste. Use additional pages if necessary. Give ranges of concentration.**

1. Solid Organic Material	84.21%	Water	0.09%	7.	
2. Misc. Debris	13.42%	5. Zinc	0.04%	8.	
3. Chlorine	0.86%	6. Iron	0.034%	9.	
Total Organic Halogens		0.86%	Total Nitrogen		NA
Total organic carbon		Not Known	Sulfur		1.553%
Does the waste contain any surfactants? <u>No</u> if so, describe <u> </u>					

III. Chemical Characteristics

(A) Inorganic

Sulfuric Acid	<u>NA</u> %	Chromic Acid	<u>NA</u> %	Potassium Hydroxide	<u>NA</u> %
Hydrochloric Acid	<u>NA</u> %	Phosphoric Acid	<u>NA</u> %	Calcium Hydroxide	<u>NA</u> %
Hydrofluoric Acid	<u>NA</u> %	Hydrobromic Acid	<u>NA</u> %	Ammonia	<u>NA</u> %
Nitric Acid	<u>NA</u> %	Sodium Hydroxide	<u>NA</u> %	Total Cyanide	<u>< 0.1</u> %
Water	<u>0.09</u> %	Free Sulfide	<u>< 0.1</u> %	Free Cyanide	<u>< 0.1</u> %

40CFR261.234			40CFR261.234		
Metals:	EP leachate	Total		EP leachate	Total
Arsenic	_____	<u>< 0.5</u> mg/kg	Copper	_____	<u>16</u> mg/kg
Barium	_____	<u>< 5</u> mg/kg	Nickel	_____	<u>2</u> mg/kg
Cadmium	_____	<u>0.55</u> mg/kg	Zinc	_____	<u>405</u> mg/kg
Chromium (Cr+3)	_____	<u>< 5</u>	Manganese	_____	<u>7.5</u> mg/kg
Lead	_____	<u>13</u>	Antimony	_____	<u>< 0.5</u> mg/kg
Mercury	_____	<u>< 0.05</u>	Beryllium	_____	<u>< 0.5</u> mg/kg
Selenium	_____	<u>1.9</u>	Bismuth	_____	_____
Silver	_____	<u>< 0.5</u>	Thallium	_____	<u>< 5</u> mg/kg
			Hexavalent Chromium	_____	<u>< 0.5</u> mg/kg

(B) Organic

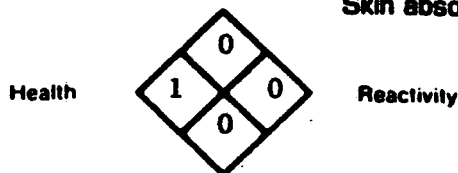
(1) Does the waste contain PCBs, dioxins, furans or pesticides No
If yes, please describe type and concentration. _____

(2) Does the waste contain any priority pollutants on the EPA list (FR Vol. 44 No. 233, Dec. 3, 1979) or any principle organic hazardous constituents in Appendix VIII listing of 40 CFR 261? _____. If yes please note with concentration of same. (See Appendix VIII attached).

(a) Toluene 18.8 mg/kg (i) _____ (m) _____
(b) Napthalene 30-6 mg/kg (j) _____ (n) _____
(c) Cadmium 0.55 mg/kg (g) _____ (k) _____ (o) _____
(d) Lead 13 mg/kg (h) _____ (l) _____ (p) _____

(C) Toxicity Information, (see last page for instructions)

● Does the waste contain any biological, pathogenic or etiological materials? No
● Rated toxicity - ingestion 1 ● Hazard Rating - Flammability 0
inhalation 0 Reactivity 0
Skin absorption 1 Health 1



● Describe any other hazards in handling this waste materials

Special instructions _____

(D) Transportation

● Does this material fit the definition of a "hazardous material" as promulgated by the U.S. Department of Transportation under 49 CFR 172, 101 and 173? Yes, if yes please give:
● DOT shipping description Waste, Hazardous substance, Solid, N.O.S.
● DOT hazard class(es) ORM-E
● Material I.D. No. (UN/NA) NA 9188
● Estimated quantity 75-150 per One (time), equipment required
Drums

(E) **Environmental Classification**

- Does the waste fit the definition of a "hazardous waste" as defined by U.S.E.P.A. under 40 CFR, Part 261? Yes If yes list the EPA Hazardous Waste Name(s) and Number(s): D008-Lead
- Does the waste fit any definitions for "hazardous waste" as promulgated by regulations in your state? If yes, describe all regulatory name(s) and code number(s); Yes- D008-Lead

(F) **Laboratory/Generator Certification/Confidentiality Agreement:**

- Please indicate if the information provided in this form was obtained from a **Certified Laboratory**
Analysis: Yes
- If such laboratory data is available please attach!

Generator Certification

I, MARK P. PANE, of EPA
(Please print name) (company name)
certify to the best of my knowledge that the attached information is true and correct;
Mark P. Pane OSC 12-30-87
(signed) (title and date)

- **Confidentiality Agreement:** I, _____ of ThermalKEM as consideration for the generator's release of the above information, any other supplemental data provided, agrees to treat such information as confidential property and will not disclose such information to others except as is required by law, and in such circumstances only after first giving notice to the generator. Signed _____ date _____ and title _____

Amendment New

AUTHORIZATION REQUEST FORM

South Carolina Department of Health and Environmental Control
Bureau of Solid and Hazardous Waste (803) 734-5200

- Landfill
- Recycle
- Landfarm
- Other
- Reclaim
- ☒ Incinerate
- Energy Recovery

Authorization Number: ST000014343

To be entered
by TSD Facility

Generator Information:

Generator ID # NJP000791236 Name USEPA Region II/Arkansas Chemical
Address 185 Foundry Street City Newark State NJ Zip Code
Official Contact Mark Pane Title OSC Telephone () -

Treatment, Storage, or Disposal Facility Information:

SC County
(for In-State Generator Only)

Facility EPA ID # SC D 0 4 4 4 4 2.3 3.3 Name ThermalKEM, Inc.

Line # (This line # will always represent this specific waste stream.)

EP Toxic Contaminated Solids

Description of Hazardous Waste

D 0 0 8 6 6 6 6 1 7

EPA/DHEC Waste Codes

DOT Hazard Class

Process Producing Waste:
Bulking of compatible drums at CERCLA site.

Enter Quarter for One-Time Disposal: 1 / 8.8 Qtr/yr.

Handling Method: T 0 9

If Multiple Shipments Enter Frequency Here: times/yr.

Volume: (lbs/yr. only) 7 5 0 0 - 1 5 0 0 0

Physical State of Waste @ 70°F

Flash Point (cc)

1. ☒ solid 2. ☐ liquid 3. ☐ N/A

1. ☐ N/A 2. ☐ <60°F 3. ☐ 60-140°F 4. ☒ >140°F

For DHEC Use Only:

Date Received

Notes:

AUTHORIZATION REQUEST FORM (con't)

Facility Use Only:

Packaging for Shipment: ☐ In Drums (size) ☒ In Bulk ☐ Other

Method of Transportation : ☐ Railroad tanker ☒ truck ☐ Other Specific Gravity: 1.65

Viscosity @ 70°F: ☐ Low ☐ Medium ☐ High N/A Layering: ☒ None ☐ Bilayered ☐ Multilayered

Suspended Solids: % by weight or volume, Specify exact % NA Dissolved Solids: by % weight, Specify exact % NA

Thousands of Btu's/lb, Specify : 13.47 Organically Bound Sulfur (wt %): 1.5 Organically Bound Chloride: 0.85

Organically Bound Nitrogen (Wt %) NA Toxicity: ☐ High ☐ Medium ☒ Low ☐ Unknown Ash %: 7.42

Affinity for Water: ☐ Hydrophilic ☒ Lipophilic pH (if hydrophilic):

Visual Description of waste: Dark brownish solid

Constituents: List specific constituents by name and corresponding percentage in waste stream.

Volatile Organics	%	Non Volatile Organics	%	Acid or Alkalies	%	Salts & Inorganics	%
Solid Organic				NONE		NONE	
Material	84	Misc. Debris	13				
Total Organic							
Halogen	2.9						

Water: 0.10 %

AUTHORIZATION REQUEST FORM (con't)

Metallic: (total metals not EP Toxicity Test)

As <u><0.5</u> ppm	Cr ⁺³ <u><5</u> ppm	Ag <u><5</u> ppm	Fe <u>335</u> ppm
Ba <u><5</u> ppm	Cr ⁺⁶ <u><0.5</u> ppm	Ni <u><2</u> ppm	Sb <u><0.5</u> ppm
Cd <u>0.55</u> ppm	Hg <u><0.5</u> ppm	Cu <u>16</u> ppm	Mn <u>7.5</u> ppm
Pb <u>13</u> ppm	Se <u>1.9</u> ppm	Ti <u>0</u> ppm	Co <u>0</u> ppm
Zn <u>405</u> ppm	_____ ppm	_____ ppm	_____ ppm

Toxics:

Cyanide	<u><5</u> ppm
Pesticides	<u>0</u> ppm
Carcinogens	<u>0</u> ppm
Other Toxics	<u>0</u> ppm

Other Information : _____

Certification :

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature : Mark P. Pane

Date Submitted : 12-30-87

Print Name : MARK P. PANE

Title : OSC

TSD Facility Certification :

I certify that based on the information presented in this document this facility is permitted to accept the waste stream described hereon, and do hereby inform the generator listed hereon of acceptance of the waste for treatment, storage, and/or disposal in the manner designated, and in compliance with the TSD Facility's standard terms and conditions.

Signature : _____

Date Submitted : _____

Print Name : _____

Title : _____

Wastex Industries, Inc.

P.A. DER 46005

N.J. DEP 77371

Licensed Analytical Laboratories

28 S. Hanover Street
125 Main Avenue

Pottstown, PA. 19464 215/327-0880
Elmwood Park, N.J. 07407 201/791-6700

P.O. # J5359-E4-36362
Sample # 871123.012

Customer # ohmate
For O.H. Materials Corp.
P.O. Box 41
Windsor NJ 08561-0041
Attn: Jim Bates

Date Sampled 11-17-87 4:00 PM Date Rec. 11-23-87 10:20 AM
Sampled By JC/BD Rec by SLG
Sample composite PWS ID :
Sample ID Newark NJ U.S. E.P.A. Region II Proj. 5359-E4
2 4529-26 Organic Solid Composite
5 4529-29 Cyanide Solid

	General	Incineration Analysis	
Dissolved Solids		NA	
Suspended Solids		NA	
Total Solids		84.21	%
Flash Point		>140	°F
Moisture Content		0.09	%
Sediment Content		100	%
BTU Content		13,470	BTU/lb
Ash Content		7.42	%
Density		1.65	g/ml
	Metals		
Antimony		<0.5	mg/kg
Arsenic		<0.5	mg/kg
Barium		<5	mg/kg
Beryllium		<0.5	mg/kg
Cadmium		0.55	mg/kg
Chromium		<5	mg/kg
Chromium (HEX)		<0.5	mg/kg
Copper		16	mg/kg
Iron		335	mg/kg
Lead		13	mg/kg
Manganese		7.5	mg/kg
Mercury		<0.05	mg/kg
Nickel		<2	mg/kg
Selenium		1.9	mg/kg
Silver		<0.5	mg/kg
Thallium		<5	mg/kg
Zinc		405	mg/kg
	Anions		
Bromine Content		<100	mg/kg

Chlorine Content

8,536

mg/kg

Iodine Content

<100

mg/kg

Sulfur Content

15,530

mg/kg

Pesticides

Aldrin	<0.02	mg/kg
alpha-BHC	<0.02	mg/kg
beta-BHC	<0.02	mg/kg
gamma-BHC	<0.02	mg/kg
delta-BHC	<0.02	mg/kg
4,4'-DDT	<0.02	mg/kg
4,4'-DDE	<0.02	mg/kg
4,4'-DDD	<0.02	mg/kg
Dieldrin	<0.02	mg/kg
alpha-Endosulfan	<0.02	mg/kg
beta-Endosulfan	<0.02	mg/kg
Endosulfan Sulfate	<0.02	mg/kg
Endrin	<0.02	mg/kg
Endrin Aldehyde	<0.02	mg/kg
Heptachlor	<0.02	mg/kg
Heptachlor Epoxide	<0.02	mg/kg
PCB-1242	<0.2	mg/kg
PCB-1254	<0.2	mg/kg
PCB-1221	<0.2	mg/kg
PCB-1232	<0.2	mg/kg
PCB-1260	<0.2	mg/kg
PCB-1016	<0.2	mg/kg
PCB-1248	<0.2	mg/kg
Chlordane	<0.2	mg/kg
Toxaphene	<0.5	mg/kg

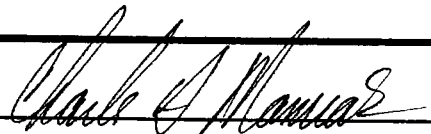
GC/MS

GC/MS Volatiles
GC/MS Base/Neutrals
GC/MS Acid Compounds

see attached sheets
see attached sheets
see attached sheets

NA = Not Applicable

Signature



ANALYSIS OF VOLATILE ORGANIC COMPOUNDS IN SOIL, SEDIMENT, SLUDGE AND
WASTE MATERIALS, METHOD 8240, GAS CHROMATOGRAPHY/ MASS SPECTROSCOPY

FORM: VOAFORM8

CLIENT	WASTEX INDUSTRIES INC.	GC/MS REF#	V009A28A.D
SAMPLE #	871123.012	MATRIX	LIQUID WASTE
COLLECTED	11/17/87	DATE ANALYZED	11/30/87
C.A.L. #	87-889	ANALYST	SABATINO
DATE REC.	11/24/87	REPORT DATE	12/12/87
% SOLIDS	SEE NOTE #1	DILUTION FACTOR	200

COMPOUND	CAS #	CONCENTRATION MGS/KG (1)	PQL (2) MGS/KG
Chloromethane	74-87-3	N.D.<1.00	1.00
Bromomethane	74-83-9	N.D.<1.00	1.00
Vinyl Chloride	75-01-4	N.D.<1.00	1.00
Chloroethane	75-00-3	N.D.<1.00	1.00
Methylene Chloride	75-09-2	N.D.<0.50	0.50
Acetone	67-64-1	N.D.<10.0	10.0
Carbon Disulfide	75-15-0	N.D.<1.00	1.00
Trichlorofluoromethane	75-69-4	N.D.<0.50	0.50
Dichlorodifluoromethane		N.D.<0.50	0.50
1,1-Dichloroethene	75-35-4	N.D.<0.50	0.50
1,1-Dichloroethane	75-35-3	N.D.<0.50	0.50
trans-1,2-Dichloroethene	156-60-5	N.D.<0.50	0.50
Chloroform	67-66-3	N.D.<0.50	0.50
1,2-Dichloroethane	107-06-2	N.D.<0.50	0.50
2-Butanone	78-93-3	N.D.<10.0	10.0
1,1,1-Trichloroethane	75-55-6	N.D.<0.50	0.50
Carbon Tetrachloride	56-23-5	N.D.<0.50	0.50
Vinyl Acetate	108-05-4	N.D.<5.00	5.00
Bromodichloromethane	75-27-4	N.D.<0.50	0.50
1,2-Dichloropropane	78-87-5	N.D.<10.0	1.00
cis-1,3-Dichloropropene	10061-01-5	N.D.<10.0	1.00
Trichloroethene	79-01-6	N.D.<0.50	0.50
Benzene	71-43-2	N.D.<0.50	0.50
Dibromochloromethane	124-48-1	N.D.<0.50	0.50
1,1,2-Trichloroethane	79-00-5	N.D.<0.50	0.50
trans-1,3-Dichloropropene	10061-02-6	N.D.<10.0	1.00
2-Chloroethylvinyl Ether	110-75-8	N.D.<10.0	1.00
Bromoform	75-25-2	N.D.<0.50	0.50
1,1,2,2-Tetrachloroethane	79-34-5	N.D.<0.50	0.50
Tetrachloroethene	127-18-4	N.D.<0.50	0.50
2-Hexanone	591-78-6	N.D.<5.00	5.00
4-Methyl-2-pentanone	108-10-1	N.D.<5.00	5.00
Toluene	108-88-3	18.8	0.50
Chlorobenzene	108-90-7	N.D.<0.50	0.50
Ethylbenzene	100-41-4	N.D.<0.50	0.50
Styrene	100-42-5	N.D.<0.50	0.50
1,3 + 1,4- Xylene Isomers		N.D.<0.50	0.50
1,2-Xylene		N.D.<0.50	0.50
1,2-Dichlorobenzene	95-50-1	N.D.<0.50	0.50
1,3-Dichlorobenzene	541-73-1	N.D.<0.50	0.50
1,4-Dichlorobenzene	106-46-7	N.D.<0.50	0.50

(1) MGS/KG = Milligrams/Kilogram (As Received), PPM

(2) PQL = Practical Quantitation Limit, PPM

(3) N.D. = Non-Detectable, less than concentration indicated

SURROGATE COMPOUND RECOVERY

	MICROGRAMS		%RECOVERY
	ADDED	FOUND	
Bromochloromethane	40.00	44.76	112
1,2-Dichloroethane D-4	40.00	38.30	96
1,4-Difluorobenzene	40.00	38.82	97
Fluorobenzene	40.00	39.02	98
Toluene D-8	40.00	52.16	130
2-Bromo-1-Chloropropane	40.00	62.44	156
Ethylbenzene D-10	40.00	33.87	85
1,4-Dichlorobutane	40.00	47.80	120
4-Bromofluorobenzene	40.00	29.34	73

NON-TARGET COMPOUNDS

CONCENTRATION
MGS/KG (4)

NOT REQUESTED BY CLIENT

(4) Concentrated Estimated Using D-6 Benzene's Response Factor


Thomas Sabatino
C.A.L. Technologies Inc.

ANALYSIS OF SEMIVOLATILE ORGANIC COMPOUNDS IN SOIL/ SEDIMENT
USING USEPA METHOD 8270, GAS CHROMATOGRAPHY/ MASS SPECTROSCOPY
FORM: BNFORM4

CLIENT	WASTEX INDUSTRIES INC.	MATRIX	LIQUID WASTE
SAMPLE #	871123.012	DATE EXTRACTED	11/30/87
C.A.L. #	87-889	DATE ANALYZED	11/30/87
DATE REC.	11/30/87	ANALYST	SABATINO
GC/MS REF #	B009A10A.D	REPORT DATE	12/17/87
% SOLIDS	SEE NOTE #1	DILUTION FACTOR	20.0

TARGET COMPOUND	CAS NUMBER	CONCENTRATION MG/KG(1)	PQL(2) MG/KG
Phenol	180-95-02	N.D. < 50	50
Bis(2-Chloroethyl) Ethyl	111-44-4	N.D. < 50	50
2-Chlorophenol	95-57-8	N.D. < 50	50
1,3-Dichlorobenzene	541-73-1	N.D. < 50	50
1,4-Dichlorobenzene	106-46-7	N.D. < 50	50
Benzyl Alcohol	100-51-6	N.D. < 100	100
1,2-Dichlorobenzene	95-50-1	N.D. < 50	50
2-Methylphenol	95-48-7	N.D. < 50	50
bis(2-Chloroisopropyl)			
Ether	39638-32-9	N.D. < 50	50
4-Methylphenol	106-44-5	N.D. < 50	50
N-Nitroso-Di-N-Propylamine	621-64-7	N.D. < 50	50
Hexachloroethane	67-72-1	N.D. < 50	50
Nitrobenzene	98-95-3	N.D. < 50	50
Isophorone	78-59-1	N.D. < 50	50
2-Nitrophenol	88-75-5	N.D. < 50	50
2,4-Dimethylphenol	105-67-9	N.D. < 50	50
Benzoic Acid	65-85-0	N.D. < 100	100
Bis(2-Chloroethoxy)			
Methane	111-91-1	N.D. < 50	50
2,4-Dichlorophenol	120-83-2	N.D. < 50	50
1,2,4-Trichlorobenzene	120-82-1	N.D. < 50	50
Naphthalene	91-20-3	30.6	50
4-Chloroaniline	106-47-8	N.D. < 100	100
Hexachlorobutadiene	87-68-3	N.D. < 50	50
4-Chloro-3-Methylphenol	59-50-7	N.D. < 50	50
2-Methylnaphthalene	91-57-6	N.D. < 50	50
Hexachlorocyclopentadiene	77-47-4	N.D. < 50	50
2,4,6-Trichlorophenol	88-06-2	N.D. < 50	50
2,4,5-Trichlorophenol	95-95-4	N.D. < 50	50
2-Chloronaphthalene	91-58-7	N.D. < 50	50
2-Nitroaniline	88-74-4	N.D. < 100	100
Dimethyl Phthalate	131-11-3	N.D. < 50	50
Acenaphthylene	208-96-8	N.D. < 50	50
3-Nitroaniline	99-09-2	N.D. < 100	100
Acenaphthene	83-32-9	N.D. < 50	50
2,4-Dinitrophenol	51-28-5	N.D. < 100	100
4-Nitrophenol	100-02-7	N.D. < 100	100
Dibenzofuran	132-64-9	N.D. < 50	50
2,4-Dinitrotoluene	121-14-2	N.D. < 50	50
2,6-Dinitrotoluene	606-20-2	N.D. < 50	50
Diethylphthalate	84-66-2	N.D. < 50	50
4-Chlorophenyl Phenyl			
Ether	7005-72-3	N.D. < 50	50

COMPOUNDS CONTINUED	CAS NUMBER	CONCENTRATION MG/KG(1)	PQL(2) MG/KG
Fluorene	86-73-7	N.D. < 50	50
4-Nitroaniline	100-01-6	N.D. < 100	100
4,6-Dinitro-2-Methylphenol	534-52-1	N.D. < 100	100
N-Nitrosodiphenylamine	86-30-6	N.D. < 50	50
4-Bromophenyl Phenyl Ether	101-55-3	N.D. < 50	50
Hexachlorobenzene	118-74-1	N.D. < 50	50
Pentachlorophenol	87-86-5	N.D. < 100	100
Phenanthrene	85-01-8	N.D. < 50	50
Anthracene	120-12-7	N.D. < 50	50
Di-n-Butylphthalate	84-74-2	N.D. < 50	50
Fluoranthene	206-44-0	N.D. < 50	50
Pyrene	129-00-0	N.D. < 50	50
Butyl Benzyl Phthalate	85-68-7	N.D. < 50	50
3,3'-Dichlorobenzidine	91-94-1	N.D. < 100	100
Benzo(a)Anthracene	56-55-3	N.D. < 50	50
Bis(2-Ethylhexyl)Phthalate	117-81-7	N.D. < 50	50
Chrysene	218-01-9	N.D. < 50	50
Di-n-octyl Phthalate	117-84-0	N.D. < 50	50
Benzo(b)Fluoranthene	205-99-2	N.D. < 50	50
Benzo(k)Fluoranthene	207-08-9	N.D. < 50	50
Benzo(a)Pyrene	50-32-8	N.D. < 50	50
Indeno(1,2,3-cd)Pyrene	193-39-5	N.D. < 50	50
Dibenz(a,h)Anthracene	53-70-3	N.D. < 50	50
Benzo(g,h,i)Perylene	191-24-2	N.D. < 50	50

SURROGATE COMPOUND RECOVERIES

SURROGATE	MG/KG ADDED	% RECOVERY
4-FLUOROANILINE	2000	46
DECAFLUOROBIPHENYL	2000	112
1-FLUORONAPHTHALENE	2000	97
2,2'-DIFLUOROBIPHENYL	2000	112
4,4'-DIBROMOBIPHENYL	2000	102
D-14 4-TERPHENYL	2000	91

NONTARGET COMPOUNDS

RETENTION MAJOR
TIME, MIN IONCONCENTRATION
MG/KG (1)

NOT REQUESTED BY CLIENT

- (1) CONCENTRATION CALCULATED AS RECEIVED (WATER INSOLUBLE WASTE)
- (2) PRACTICAL QUANTITATION LIMITS BASED ON A 30 GRAM SAMPLE SIZE
- (3) NONTARGET COMPOUNDS QUANTITATED RELATIVE TO PHENANTHRENE-D10'S RESPONSE FACTOR
- (4) PARENT ION NOT FOUND IN EI MASS SPECTRA



Thomas Sabatino
C.A.L. Technologies Inc.

ANALYTICAL METHOD SUMMARY AND APPLICATIONS FOR SEMIVOLATILE ORGANIC
COMPOUND ANALYSIS

Method 8270 is used to qualitatively identify and quantitate, using extracted ion profiles, semivolatile organic compounds in extracts prepared from all types of solid waste matrices, soils and ground water. Direct injection of a sample may be used in limited applications.

Method 8270 can be used to quantitate most neutral, acidic and basic organic compounds that are soluble in methylene chloride and capable of being separated without derivatization as sharp chromatographic components from a gas chromatograph utilizing a fused silica capillary column coated with a slightly polar organosilane stationary phase. Organic compound classes which are analyzed by this procedure include the following: polynuclear aromatic hydrocarbons, chlorinated hydrocarbons, organochlorine pesticides, phthalate esters, organophosphate esters, nitrosoamines, haloethers, aldehydes, ethers, ketones, anilines, pyridines, quinolines, substituted nitroaromatic compounds and phenols.

The following individual organic compounds may require special treatment when being analyzed by this method. Benzidine can be subject to oxidative losses during extract concentration, chromatography is also very poor for this compound. Using alkaline conditions for base/neutral extraction of aqueous samples; Alpha-BHC, Lindane, Endosulfan I and II, and Endrin are subject to decomposition. Neutral extraction conditions should be employed if these compounds are expected. Hexachlorocyclopentadiene is subject to thermal decomposition in the inlet of the gas chromatograph, chemical reaction in acetone solution and photochemical decomposition. N-nitrosodimethyl amine is difficult to separate from the solvent under the chromatographic conditions described in this analytical procedure. N-nitrosodiphenyl amine decomposes in the gas chromatographic inlet and cannot be separated from Diphenylamine. Pentachlorophenol, 2,4-Dinitrophenol, 4-Nitrophenol, 4,6-Dinitro-2-Methylphenol, 4-Chloro-3-Methylphenol, Benzoic Acid, 2-Nitroaniline, 3-Nitroaniline, 4-Chloroaniline and Benzyl Alcohol are subject to Erratic chromatographic behavior, especially if the gas chromatographic system is contaminated with high boiling or polymeric materials from the sample extract.

The Practical Quantitation Limit (PQL) of Method 8270 for the determination of an individual semivolatile compound is approximately 1 MG/KG (wet weight) for soil/ sediment matrices (low level), 1 to 200 MG/KG for waste samples (depending on the matrix and method of sample preparation) and 10 UG/L for ground water samples. PQLs will be proportionately higher for sample extracts that require dilution to avoid saturation of the analytical system.

Method 8270 is restricted to use by or under the supervision of analysts experienced in the use of gas chromatography/ mass spectrometer systems and skilled in the interpretation of mass spectra. Each analyst must demonstrate the ability to generate acceptable results with this analytical procedure.

ANALYTICAL METHOD SUMMARY AND APPLICATIONS FOR VOLATILE ORGANIC
COMPOUND ANALYSIS

Volatile organic compounds are introduced into a gas chromatographic/mass spectrometer system by either a purge and trap isolation system or by direct injection of liquid or gaseous sample (in limited applications). The organic compounds are separated by gas chromatography and detected by mass spectrometry, which is used to provide both qualitative and quantitative information.

If either purge and trap or direct sample introduction is not applicable to the sample matrix, a portion of the sample is dispersed in methanol to dissolve the volatile organic components; an aliquot of the methanol extract is added to reagent water and is subjected to the purge and trap technique and analyzed by gas chromatography/mass spectrometry.

The purge and trap or dynamic head space procedure involves the use of an inert gas (Helium or Nitrogen) which is bubbled through the sample solution at ambient temperature, and the volatile components are transferred from the aqueous phase to the vapor phase. The vapor is swept onto a sorbent column where the volatile organic compounds are trapped. After purging is completed, the sorbent column is heated and backflushed with chromatographic column carrier gas to desorb the analytes onto the gas chromatographic column. The gas chromatographic column is then heated so that the analyte compounds are separated, the separated components are then detected by a mass spectrometer.

Method 8240 is used to determine volatile organic compounds in a variety of solid waste matrices. This method is applicable to nearly all types of samples, regardless of water content, including ground water, aqueous sludges, caustic liquors, waste solvents, oily wastes, mousses, tars, fibrous wastes, polymeric emulsions, filter cakes, spent carbons, spent catalyst, soils and sediments.

Method 8240 can be used to quantify most volatile organic compounds that have boiling points below 200 C and that are insoluble or slightly in water. Volatile water-soluble compounds can be included in this analytical technique. However; for the more soluble compounds, quantitation limits are approximately ten to fifty times higher because of poor purging efficiency. The method is also limited to compounds which separate as sharp chromatographic components. Such compound classes include: low molecular weight halogenated hydrocarbons, aromatic hydrocarbons, ketones, nitriles, acetates, acrylates, ethers and mercaptans.

The practical quantitation limit (PQL) for Method 8240 for an individual (ideal) compound is approximately 5 ug/kg (PPB, wet weight) for soil/sediment samples, 500 ug/kg (PPB, wet weight) for low level wastes and 5 ug/l (PPB) for ground water. PQLs will be proportionately higher for sample extracts and samples that require dilution or reduced sample size to avoid saturation of the analytical system.

Method 8240 is based on a purge and trap sample isolation procedure followed by gas chromatographic separation and mass spectrometry detection. This method is restricted to use by, or under the supervision of, analysts experienced in the use of purge and trap isolation systems and gas chromatographic/mass spectrometry systems and skilled in the interpretation of spectra and their use as a quantitative tool.